(Last Updated: 26 September 2005)

Establishing Operating Positions Checklist

Person on Shift: _____ Time / Date (pots in/out): _____

!!!!!!!IF AT ANY TIME THERE IS A PROBLEM, TURN OFF ALL CONTROL LINES!!!!!!

SETUP

- ❑ **Login to elogbook**
- ❑ **Read: ____ FPD Runplan on the web**
  ____ Last 8 Days Entries to FPD elogbook (Entries from Last Pot Insertion at a Minimum)
  [open in web browser, unselect INCLUDE_ALL, select FPD, change hours to days]
  ____ FPD Issues (http://d0server1.fnal.gov/users/strang/web/fpd/documents/FPDIssues.txt)
- ❑ **Be Familiar with Emergency Procedures to use during Pot Motion (see online checklist)**
- ❑ **Verify Software is Running: ___Pot Motion, ___HV, ___Rate Watcher, ___SES alarm display, ___Rack Environment Alarm Monitor, ____ A/S on**
- ❑ **Verify that ACNET is Setup Properly: ___FTP, ___C72, ___D44, ___Lumberjack.**
- ❑ **Verify there are No Alarms in the SES display, if there are, attempt to clear them.**
- ❑ **Ramp HV to 100 % for All L0 Trigger Tubes (if rates are not updating verify trigger is using generator signal)**
- ❑ **Create screen capture of D44 lumberjack screen showing normal rates for last store and put in elogbook.**
- ❑ **Create a screen capture of the FPD Runstate page (http://www-d0online.fnal.gov/fpd_run_state/)**
  If this page isn't accurate, make copies of the Beams Division notify webpage ____,
  C72 page (halo rates)_____ and FPDGui (singles rates)_____. Notify Vladimir Sirotenko _____
- ❑ **Have Shift Captain Notify MCR and CDF that we are going to insert pots**
- ❑ **Verify with Shift Captain that the Beam Spot at D0 has not significantly changed**
- ❑ **Open expert mode of FPDGui and initialize halo viewer**

Dipole Insertion to establish operating positions (Start at Lum 40e30, End by Lum 30e30):

- ❑ **Setup camera to display dipole motors.**
- ❑ **Setup D44 to display rates for dipole pots.**
- ❑ **Turn on drivers in Pot Motion Software for dipole castle**
- ❑ **Turn on A side control line.**
- ❑ **Move D1 pot by itself in small, slow steps recording singles rate. As rate increases decrease step size. Once rate starts doubling with a 0.1mm step stop insertion and record last position as operating position. (If you reach software limit before establishing position, increase limit by 1mm). Stop if single rates reach 450kHz.**
- ❑ **Bring ____D1 back to its starting position and repeat above step for ____D2.**
- ❑ **Bring dipole pots home**
- ❑ **Turn off dipole drivers**
- ❑ **Turn off A side control lines**

A side Insertion to establish operating positions (Start at Lum 40e30, end by Lum 30e30):

- ❑ **Setup camera to display A vertical / horizontal motors.**
- ❑ **Setup D44 to display A vertical rates and calculate a 50% increase of starting phalo rate for stopping condition (maximum 6kHz)**
- ❑ **Turn on drivers in Pot Motion Software for A1 and A2**
- ❑ **Turn on A side control line**

- **Move A1U by itself in small, slow steps recording singles rates and phalo. Stop if you reach your halo limit or if CDF ahalo more than triples. As singles rate increases decrease step size. Once rate starts doubling with a 0.1mm step, stop insertion and record last position as operating position (If you reach software limit before establishing position, increase limit by 1mm). Stop if single rates reach 450kHz.**
- **Return ____A1U to the starting position (home) and repeat for ____A1D, ____A2U, ____A2D**
- **Bring A vertical pots home.**
- **Setup D44 to display A horizontal rates and calculate 50% increase of starting phalo rate for stopping condition**
- **Move A1I by itself in small, slow steps recording singles rates and phalo. Stop if you reach your halo limit or if CDF ahalo more than triples. As singles rate increases decrease step size. Once rate starts doubling with a 0.1mm step, stop insertion and record last position as operating position (If you reach software limit before establishing position, increase limit by 1mm). Stop if single rates reach 450kHz.**
- **Return ____A1I to the starting position and repeat for ____A1O, ____A2I, ____A2O**
- **Bring A horizontal pots home**
- **Turn off A side control line**
- **Turn off A1 and A2 drivers**

P side Insertion to establish operating positions (Start at Lum 40e30, end by Lum 30e30):

- **Setup camera to display P vertical / horizontal motors.**
- **Setup D44 to display P vertical rates and calculate a 50% increase of starting ahalo rate for stopping condition (maximum 2 kHz)**
- **Turn on drivers in Pot Motion Software for P1 and P2**
- **Turn on P side control line**
- **Move P1U by itself in small, slow steps recording singles rates and ahalo. Stop if you reach your halo limit. As singles rate increases decrease step size. Once rate starts doubling, stop insertion and record last position as operating position (If you reach software limit before establishing position, increase limit by 1mm). Stop if single rates reach 450kHz.**
- **Return ____P1U to the starting position and repeat for ____P1D, ____P2U, ____P2D**
- **Bring P vertical pots home.**
- **Setup D44 to display P horizontal rates and calculate 50% increase of starting ahalo rate for stopping condition**
- **Move P1I by itself in small, slow steps recording singles rates and ahalo. Stop if you reach your halo limit. As singles rate increases decrease step size. Once rate starts doubling with a 0.1mm step, stop insertion and record last position as operating position (If you reach software limit before establishing position, increase limit by max 1mm). Stop if single rates reach 450kHz.**
- **Return ____P1I to the starting position and repeat for ____P1O, ____P2I, ____P2O**
- **Bring P horizontal pots home**
- **Turn off P side control line**
- **Turn off P1 and P2 drivers**

Standby

- If you had to change any software limits, make sure they have all been reset to the green values of the existing insertion table. THIS IS EXTERMELY IMPORTANT
- Close Expert mode of FPDGui.
- Iris off the cameras
- Make sure all drivers, control lines are off and HVs are ramped down to standby
- Send mail to d0fpd_local@fnal.gov with a summary of the insertion.